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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/942,015	08/29/2001	Steven P. Donovan	140/39314	8999

7590 03/24/2004

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EXAMINER

FREJD, RUSSELL WARREN

ART UNIT	PAPER NUMBER
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2128

DATE MAILED: 03/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/942,015

Applicant(s)

DONOVAN, STEVEN P.

Examiner

Russell Frejd

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 January 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-15 is/are allowed.
- 6) ☒ Claim(s) 1-6 and 16-18 is/are rejected.
- 7) ☒ Claim(s) 7 and 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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Examination of Application #09/942,015

1. Claims 1-19 of application 09/942,015, filed on 29-August-2001, are presented for examination.

Claim Rejections under 35 U.S.C. § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-6 and 16-18 are rejected under 35 U.S.C. 102(b) as being anticipated by the article authored by Y. Tang, and entitled *Characterizations, Numerical Analysis, and Design of Switched Reluctance Motors*.

- 3.1 Tang disclosed the invention as claimed, including a design by analysis and simulation method for SRMs, and the development method of a new design software [p. 1544, c. 1 and Abstract] comprising:

In regard to claims 1 and 16, an integrated electronic motor design methodology for the purpose of analysis, conceptual design, and design for manufacturability, wherein the design and analysis flow is implemented in an open, streamlined, and unified software in the MATLAB computing environment. A seamless integration of geometric modeling, FEA, dynamic simulation of motor, drive and control, and additional analysis and calculation facilitates the design iterations specifically tailored to the characteristics of the SRM. The same FEA core,

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integrated into the motor design software and implemented with MATLAB's partial differential equation tool, is used for magnetic, mechanical, and thermal calculations; however, analytical or empirical solutions are also implemented for the same concerns as the alternatives to FEA [p. 1545, sec. II, and Fig. 1] (*applicant's design software for performing an analysis on a proposed design and application*).

In regard to claim 2, a graphical geometric display generated from the concept of sets, in which sets of objects are mathematically manipulated by sets operators to define the problem geometry [p. 1545, c. 1, and Fig. 2].

In regard to claim 3, the parameterization of the geometry, resulting in the ease of parameter editing and iterating, facilitates the design iterations [p. 1545, c. 2, 1st par.].

In regard to claims 4-6, 17, and 18, a deformation and stress analysis under load shape diagram [p. 1549, sec. V, subsec. B *Static Stress*, and Fig. 9].

Claim Objections

4. The remaining claims 7 and 19, are objected to for incorporating the rejection of their respective base claims by dependency.

Allowed Claims

5. Claims 8-15 are deemed allowable over the prior art of record at his time.

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Response Guidelines

6. A shortened statutory period for response to this action is set to expire **3 (three) months and 0 (zero) days** from the date of this letter. Failure to respond within the period for response will cause the application to become abandoned (see MPEP 710.02, 710.02(b)).

7. **Any response to the Examiner in regard to this non-final action should be**

directed to: Russell Frejd, telephone number (703) 305-4839, Monday-Friday from 0630 to 1500 ET, or the examiner's supervisor, Kevin Teska, telephone number (703) 305-9704. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist, telephone number (703) 305-3900.

mailed to: Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to: (703) 872-9306

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Date: 21-March-2004



**RUSSELL FREJD
PRIMARY EXAMINER**